

Corneal tight junction integrity

QY Qian Yu

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 An abbreviated version of this protocol was published in eLIFE in Jun 2021

Canonical NF- κ B signaling maintains corneal epithelial integrity and prevents corneal aging via retinoic acid

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Detailed protocol

Hutcheon described a functional assay of corneal epithelial cell tight junction integrity using LC-biotin, which does not penetrate through the epithelium in the presence of intact tight junctions, whereas defective tight junctions allow penetration through the epithelium and into the corneal stroma. In brief, 10 ml LC-biotin staining solution (EZ-Link-Sulfo-NHS-LC-Biotin, 10 mM, Thermo Fisher Scientific) was applied to the cornea of wild-type and *Rela* deficient mice for 15 min at the time of euthanasia. Eyeballs were rinsed with PBS, enucleated and placed in OCT for frozen sectioning. Sections were stained with FITC-streptavidin to detect the presence of LC-biotin and then quantified based on FITC signals.

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Yu, Q. (2023). Corneal tight junction integrity. Bio-protocol Preprint. bio-protocol.org/prep2380.
2. Yu, Q., Biswas, S., Ma, G., Zhao, P., Li, B. and Li, J.(2021). Canonical NF- κ B signaling maintains corneal epithelial integrity and prevents corneal aging via retinoic acid. eLIFE. DOI: [10.7554/eLife.67315](https://doi.org/10.7554/eLife.67315)

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